

Slide 1 of 25

Slide Title: Data Collected Through the ELS:2002

Slide 2 of 25

This module provides information about the data collected through the Education Longitudinal Study of 2002, or ELS:2002. It describes the questionnaires used to collect data from students, parents, school administrators, and mathematics and English teachers. It also includes an overview of the important variables related to ELS data that are collected on the surveys. This module also describes the mathematics and reading assessments used as part of ELS. Lastly, the module provides information on the response rates to the ELS questionnaires across the data collection rounds.

Slide 3 of 25

This slide shows all survey and assessment components in the Base Year and First Follow-up together.

In the Base Year, data were collected for sampled sophomores in the spring of 2002. In the first follow-up, data were collected for sampled seniors in the spring of 2004.

The most important part of each collection, across all rounds (also referred to as waves or sometimes follow-ups), is the student questionnaire, because the student is the main level of analysis. Data related to sample students' mathematics and reading achievement come from the student assessments that were conducted in the base year and again during the first follow-up (for the math assessment). The base year collection was also complemented by other sources for contextual data, including the parent questionnaire, teacher questionnaires from math and English teachers, principal questionnaires, a library/media center questionnaire given to the library director and a school facilities checklist which was filled out by the survey interviewer when they visited the school to conduct the study.

By the first follow-up, students' pathways began to diverge. Because of this, specialized questionnaires were given to sample members. Students still enrolled in their base year school were given the full student questionnaire, while students who had transferred to another high school received a transfer student questionnaire. Students who had dropped out of school received a dropout questionnaire, students who had already graduated by spring of 2004 were given an early graduate questionnaire. Additionally, students who were now home schooled at the time of the first follow-up data collection received a home school questionnaire. New students added to the senior cohort because of sample "freshening" received a new student questionnaire, which was designed to collect some of the information collected during the base year data collection, when these new students were not yet part of the study. In the first follow-up, students took only a mathematics assessment.

Data Collected Through the ELS:2002

There was neither a first follow-up parent questionnaire nor teacher questionnaires administered during this round of data collection; though there was a principal questionnaire administered only to principals of base year schools.

Slide 4 of 25

Let's take a more detailed look at the types of information collected in the base year and first follow-up which are provided within ELS:2002 data files.

Within the base year and first follow-up data files, variables such as those listed here are provided to describe student background characteristics. These data were collected from student, parent, and teacher questionnaires, as well as school records.

Race/ethnicity data were collected using five main race groups (American Indian or Alaska Native, Asian, Black/African American, Native Hawaiian or Other Pacific Islander, and White). In 2002, Hispanics were considered an ethnicity. The race/ethnicity information was collected from the parent and student questionnaires in addition to the school roster. Asian racial groups are further broken down by sub-race groups and Hispanics into sub-ethnic groups.

Detailed information on the parent's and student's date and place of birth and native language; the grade during which the sample student first attended a U.S. school; and the student's English-speaking ability are provided on the base year and first follow-up data files.

Student background variables regarding sample students' disabilities and academic history are available for analysis. ELS:2002 also collected detailed information directly from parents regarding denominational religious beliefs, parental education, occupation, and income, as well as detailed household composition information.

Student background variables can be found in their raw form and as composite variables that can be compared across NCES secondary longitudinal studies. The Data File Documentation (or DFD), the Education Data Analysis Tool (or eDAT), or the Electronic Code Book (or ECB) can be accessed to provide details regarding the raw data (that is, exactly how sample members answered the questionnaire items), the derivation of composite variables provided on each of the ELS:2002 data files, and details regarding the variables common to all NCES secondary longitudinal studies.

Slide 5 of 25

Within the base year and first follow-up data files, variables such as those listed here are provided to describe the school climate.

In the student questionnaires, sample students were asked about their perceptions of the interactions between teachers and students at their school.

In order to determine incidence of crime and behavioral disruptions, parent, student, and school principal questionnaires contained items regarding the frequency of crime

Data Collected Through the ELS:2002

and disruptions in the school. Students and principals were asked about school rules and the disciplinary structure in the school to assess school safety policies, and principals were asked about safety policies within their school.

There were a number of questions on academic press asked of the student, principal, and the students' parents. Academic press is a construct that encompasses information regarding expectations for student achievement, clear achievement-oriented goals, the amount of time spent on instruction, and the amount of homework assigned to students.

Principals were asked about the technology available within their schools and the degree to which it was used by teachers. Lastly, principals were asked about teacher quality and the rewards for good teaching within their school.

Slide 6 of 25

Information regarding school structure was obtained from principals during the base year and the first follow-up.

To expand on the information provided in the sampling frame, more information on the school type was obtained from principals. For example one school type included within ELS:2002 is "public comprehensive", another is "charter school." The full list of school types described within ELS:2002 is provided within the School Types Resource Document, which can be accessed by clicking on the underlined screen text, 'School type'. Researchers should note that the number of schools in some of these categories is low for some types of analyses.

Information regarding the school calendar and class schedule are also included within the school structure variables of ELS:2002.

The principal was asked about the extent of differentiation in the school curriculum by student ability and how students of differing abilities were grouped. For example, principals were asked to report the proportion of their school's students who were college bound. In addition to these data, ELS:2002 contains information about the special programs offered within the school and how many students participated or were enrolled in those programs.

School structure questions also included the demographic composition of the school, such as the percentage of free or reduced price lunch-qualifying students; detailed information about graduation requirements and competency testing; and teacher qualifications, such as the percentage of teachers who were certified in the field they were teaching.

Lastly, the principal was asked to report his or her influence on policy areas, such as deciding what courses will be offered at the school.

Slide 7 of 25

Student behavior and performance information from sample students, teachers, and transcripts was obtained during the base year and the first follow-up.

In order to assess behavior infractions, students and their teachers were asked about the frequency of each student's absence and tardiness from school, as well as the number of suspensions. The teachers were also asked about the frequency with which each student is absent from class, tardy to class, and disruptive in class.

To determine student preparation for class, teachers and students were asked about how often the student came to class prepared, and how often he or she came to class without having completed the assigned homework. Course-taking, courses completed, and GPA were ascertained by reviewing high school transcripts of sampled students.

Receipt of honors and recognition information was collected both from student and teacher questionnaires, as well as the high school transcript collection.

Lastly, student performance data specific to mathematics and reading were assessed by the ELS:2002 Assessment Battery.

Slide 8 of 25

The purpose of the ELS:2002 assessment battery was to provide measures of student achievement in reading and mathematics for individuals, and groups of individuals, that can be related to student background and educational process variables.

ELS:2002 included a reading test administered in grade 10 and a mathematics test administered in grades 10 and 12. The reading assessment measured the reading level of individual students at one point in time. Mathematics was measured at two points in time, and used many of the same items in both the 10th grade and 12th grade versions, allowing for analysis of growth of individual students over time. Item Response Theory (or IRT) methods were used to scale the items in both the ELS reading and mathematics assessments. More information regarding IRT may be accessed by clicking on the underlined screen text, 'IRT.'

Slide 9 of 25

Test specifications were derived from frameworks used for NELS:88, and to facilitate equating and the construction of a cross-grade scale many of the test items were taken from NELS:88, NAEP, and PISA reading and mathematics assessments. This allows equating the ELS:2002 reading and mathematics assessments to the NELS:88 reading and mathematics tests, making longitudinal comparison of achievement scores possible. Note that concordance scores, or links based on population distributions, are also available for the NAEP 12th grade mathematics scale and the PISA 2003 mathematics and PISA 2000 reading assessments.

Data Collected Through the ELS:2002

Some assessment data are available in composite form and are public-use, such as the math test standardized score, but many data from the assessments, such as the math test theta t-score, are restricted-use only.

Slide 10 of 25

The ELS:2002 10th grade reading assessment consisted of reading passages from one paragraph to one page in length, followed by three to six questions. The reading material includes literary content as well as natural and social science content, and was designed to measure reading comprehension.

The 10th and 12th grade mathematics assessments consisted of both word problems and multiple choice items in arithmetic, algebra, geometry, data analysis/probability, and “advanced topics.” The items were also categorized according to the cognitive processes they primarily tap, which are skill/knowledge, understanding/comprehension, and problem-solving ability.

The ELS:2002 assessments were mildly adaptive; meaning that each student took a routing portion of the test, and his or her performance on that portion determined whether he or she received the low, middle, or high level of difficulty items for the second portion of the test. In this way, ELS assessments were less susceptible to floor and ceiling effects than they would be if they were not adaptive, meaning they were better able to more efficiently assess each student’s skill level.

More information regarding the ELS assessments can be found within Chapter 2 of the ELS data file user’s manual, which can be accessed by clicking on the underlined screen text, ‘[ELS:2002 Reading and Mathematics Assessments](#).’

Slide 11 of 25

Additional student behavior and performance information for ELS sample members can be found within the high school transcript data collection. ELS:2002 offers data from high school transcripts that were collected for all students in the sample regardless of their status in the sample. Data were collected by going to sample members’ base year schools or to the last school reportedly attended for those students who had transferred. This strategy provided more complete transcripts than would have been obtained by going exclusively to the base year school or the last school attended.

The transcripts provide a complete record of high school coursework by course title, grade earned, and year, term, and grade in school. All transcript data were coded according to the Classification of Secondary School Courses (or CSSC) course classification scheme. More information about the CSSC can be accessed by clicking on the corresponding underlined screen text.

Slide 12 of 25

In addition to this coursework information, the transcripts provide high school completion status, in terms of diploma or certificate of attendance and date of graduation or DATE WHEN SCHOOL WAS LEFT.

School course catalogs were also collected, as was information about grading system in the school, in order to be able to standardize the grades on students' transcripts. Both standardized and raw grade point averages are included in the ELS:2002 transcript data.

Researchers who are interested in high school course-taking should view the module titled, 'Considerations for Analysis of ELS:2002 Data,' which is accessible by clicking on the underlined screen text, 'high school transcripts.' Additionally, more information regarding the ELS transcript collection can be found within Chapter 2 of the ELS second follow-up data file user's manual, which can be accessed by clicking on the underlined screen text, 'Transcript sample.' It is important to note that the ELS high school transcript collection is not the same as the High School Transcript Study associated with the National Assessment of Educational Progress, or NAEP.

Slide 13 of 25

Within the base year and first follow-up data files, variables such as those listed here are provided to describe student motivation and engagement. Students were asked specific questions about the amount of time they spend in and out of school on homework and on math homework in particular. Students were also asked about the importance of grades to them and to their friends.

In order to determine perceptions of parents' expectations of future student academic achievement, students were asked how far they believed their parents expected them to progress in school. In terms of engagement, students were asked to report on their reasons for attending school, and how much they liked school.

Mathematics and English self-efficacy were substantial constructs measured in ELS:2002, as they have been in previous NCES secondary studies. Many of these questions came from the NLS-72 questionnaire and included students' confidence in doing an excellent job on mathematics/English tests; confidence in understanding the most complex material presented by mathematics/English teachers; and ability to get totally absorbed when doing mathematics.

ELS:2002 sample students were also asked Likert-type questions about their expectations of control and action. For example, questions like: "When I sit myself down to learn something really hard, I can learn it" and "Most people can learn to be good at math versus have to be born with ability" were asked as a measure of how much control they felt over their ability to learn.

Slide 14 of 25

Within the base year and first follow-up data files, variables such as those listed here are provided to describe the classroom experience of ELS:2002 sample students.

Teachers were asked about the sampled student's participation in classroom activities.

Information regarding the teacher's perceptions of the sample student's interaction with peers in class and with the teachers outside of class was also collected. Lastly, teachers were asked to provide detailed information about their education, certifications, and experience, as well as professional development opportunities at their schools.

Sample students were asked about whether they had participated in special programs, such as remediation, bilingual education, and dropout prevention. Students were also asked about their computer use both at home and at school.

Slide 15 of 25

Information about student experiences outside of the classroom was collected from students and parents during the base year and the first follow-up of ELS:2002. Students were asked about their participation in sports, clubs, hobbies, and community service; as well as their employment status while in school. Items regarding participation in family activities such as cultural events and family routines were also included in this data collection, as were items regarding how much time students spent on homework, reading, watching TV/videos, hobbies, and/or with friends.

Slide 16 of 25

Within the base year and first follow-up data files, variables are provided to describe the social capital of the student's educational and family environment. To determine the extent to which parents were familiar with the student's social network, both students and parents were asked whether or not parents were aware of the student's friends and parents of the friends. As a measure of influences on students, student sample members were asked about their close friends' values, expectations, and goals for the future.

Teachers were asked about contacts from the sampled student's parent and the parent's involvement in their child's school.

Students were asked about their parent's relationship to their education, such as how often the parent provides homework assistance. Students were also asked about family rules that may affect students' motivation, such as the giving of privileges for good grades.

Slide 17 of 25

Within the base year and first follow-up data files, questions were asked of students, teachers, and parents to understand plans and expectations of sample students.

Students, teachers, and parents were asked for their perspective on the student's educational and occupational expectations. As in every NCES secondary longitudinal study, the ELS:2002 also included a question on the occupation the student expects to have at age 30. Students were also asked about their values for future life, such as getting a good education, and their perceptions of their family's expectations for their future success as well as those of teachers, and counselors. Questions about preparation for college included asking about sources of information about college, plans to take the entrance exam, savings for college, and whether or not they were participating in a college-bound program. Lastly, students and parents were also asked about the factors to be considered when deciding which college the student would attend.

Slide 18 of 25

This slide shows the survey components for the second and third follow-ups to ELS:2002. These two collections were much simpler than those in the base year and first follow-up data collection rounds. During these rounds, mainly outcome data were collected directly from sampled students, as the second and third follow-ups were designed to collect data regarding aspects of emerging adulthood.

The Second Follow-up took place two years after most of the sample members graduated from high school. The focus of the Second Follow-up was on postsecondary access and choice, which was **different** from previous NCES secondary longitudinal studies.

Gate questions are used in ELS to route survey respondents through the questionnaire based on responses to individual items. Gate questions are used to save survey respondents' time, as some items on the questionnaire won't apply to all sample members. In ELS, sample members were asked gate questions about their activities at the beginning of the questionnaire. Then respondents were routed to different components of the survey based on their responses to the activity status items. Sample members who were currently enrolled in postsecondary education at the time of the second follow-up and who had enrolled within 6 months of completing high school were considered "standard enrollees." Students who had delayed enrollment in postsecondary education, typically by a semester or two, but were enrolled at the time of the 2006 data collection were considered "delayers." Students who had enrolled immediately but left the postsecondary institution by the time of the second follow-up were considered "leavers." Students who had delayed enrollment and had left by the time of the second follow-up were considered "delayer-leavers." Delaying students were asked questions about why they had delayed enrollment, while leaver students were asked questions about why they had left their postsecondary institution. Non-enrollee students were asked special questions about their activities other than education, such

Data Collected Through the ELS:2002

as employment. Students who were still enrolled in high school were asked about their expected high school completion date. It is important to note that ALL sample members were asked about their eventual education attainment expectations.

The third follow-up data collection in 2012 concluded the study by collecting educational and career outcome data from the sample members eight years after most of the sample members graduated from high school. More gate questions were asked in the third follow-up which once again routed the respondents to relevant portions of the questionnaire. It is important to note that in the third follow-up, sample members could have potentially been administered all components of the survey based on their responses to the gate questions.

Slide 19 of 25

ELS:2002 second follow-up focuses on the post-high school experience of sampled students. The data collection includes such topics as reasons for college choice, college coursework, academic and social integration, enrollment intensity, means of financing enrollment, college work-study or other employment, and reasons for non-enrollment, if applicable.

In addition to topics regarding college access and choice, information about the student's "college experience" in the first postsecondary institution attended during the two years after high school was obtained in the second follow-up. These data include reasons why the respondent attended the first postsecondary institution that he or she has attended; and, if no longer enrolled in that college, reasons why.

Some data on the college course work taken at the first institution by the sample member were also collected, which include the sample member's: initial field of study; current major and minor fields of study; whether any *remedial courses* were taken in mathematics, reading, and writing; and self reports on the adequacy of high school preparation for college work.

Other data were also collected on the sample students' social and academic integration into the first real college attended, which included: faculty and advisor contacts; participation in extracurricular activities; and participation in sports. Also, data on the sample member's enrollment intensity (i.e., full- or part- time status) were collected for all colleges attended.

Topics also included in the second follow-up regard how the student was funding his or her college education and whether the student had a college work/study or other job. Important "reasons why" questions for this round included the reasons why students did not enroll in a postsecondary institution following high school or, if they had enrolled but were no longer attending college, why not.

Slide 20 of 25

There were three main content areas for the third and final follow-up of ELS:2002 data collection: ATTAINMENT IN EDUCATION; EMPLOYMENT AND OCCUPATION; AND FINANCES, FAMILY, AND LIFE EVENTS. All data were collected from questionnaires filled out by the sample member, or from administrative records. Many of these data are what can be termed “outcome” variables, because they provide information about the outcomes of educational decisions students and families made in the earlier rounds of the study, such as whether a postsecondary credential was earned.

The first content or topic area asked sample members questions about their attainment in education. Students that hadn’t received a high school diploma or General Educational Development (GED) at the time of the last follow-up in 2006 were asked if they had now completed their diploma or equivalent.

Postsecondary enrollment was asked about for all institutions a student attended, whether or not a degree or certificate had been earned. Fields of study and degrees/certificates earned were also asked about. Questions about aspirations and expectations for eventual educational completion level were also asked of the sampled students. Those sample members who had attended a postsecondary institution were asked about financing and debt. For administrative records of federal student loans and grants, data was linked to the National Student Loan Data System (NSLDS). The Central Processing System (CPS), which contains data from the Free Application for Federal Student Aid (FAFSA), was queried for information about FAFSA filing. Information about GED test taking and passing was collected from the GED Testing Service (GEDTS).

Slide 21 of 25

THE SECOND TOPIC, employment and occupation, asked sample members QUESTIONS about their current employment and their employment history. Job certifications, licensure and employer-provided training were also asked about. Sample members who were employed were asked about their satisfaction with their job, and about the benefits their employers provided, if any.

The last topic of the third follow-up covered sample members’ finances, family information, values and important life events. Information about income and assets were asked of sample members, and their spouse, if married. Sample members were also asked about whether they had started a family and its size. Sample members were asked about their marital status and their living arrangements. Questions such as whether or not they lived with a significant other, with parents, with friends, or in some other arrangement, and whether they paid a mortgage were asked in this round of data collection.

Questions about civic participation, namely volunteerism and whether the sample member had voted in recent elections, were also asked. A set of values questions asked about the importance of family, career, and having a lot of money. Finally,

Data Collected Through the ELS:2002

sample members were asked to report on significant life events that may have happened to them, such as divorce of themselves or a parent, illness of themselves or a parent, and childbearing.

Slide 22 of 25

In 2013-2014, postsecondary transcripts of ELS:2002 sample students were collected to provide information regarding college course-taking, enrollment patterns, remediation, transfer between institutions, and many other postsecondary outcomes of interest. Postsecondary transcript data collection followed the third follow-up, which collected the needed postsecondary attendance and attainment data necessary for the postsecondary transcript collection.

Sample member's entire enrollment history through 2012 is included in the postsecondary transcript collection. It should be noted that institutions not previously detailed within the third follow-up that appear on sample student's transcripts were also contacted to provide additional transcript data. Data regarding graduate enrollment, if indicated on the F3 questionnaire, are also collected.

Transcript composites will be produced, as well as record-level variables, as part of an ELS:2002 release expected in 2015. It is always a good idea to check the ELS:2002 website occasionally for information about new data releases or issues that have been found in the data of which people should be aware.

Slide 23 of 25

Response rates associated with ELS:2002 across data collection rounds are provided here, in both weighted and unweighted counts. While some attrition from the sample occurred over time, the majority of the sample was preserved throughout the study. Overall, about 84% of the 2002 sophomore cohort, and about 85% of the 2004 senior cohort participated in the 2012 third follow-up data collection.

More information regarding ELS:2002 response rates can be found within Chapter 4 of the ELS third follow-up data file user's manual, which can be accessed by clicking on the underlined screen text, '[ELS:2002 Response Rates](#).'

Slide 24 of 25

This module provided information about the data collected through the Education Longitudinal Study of 2002, or ELS:2002. It described the questionnaires used to collect data from students, parents, school administrators, and mathematics and English teachers. It also described the mathematics and reading assessments used as part of ELS and the provided information regarding response rates across the ELS data collection rounds.

Slide 25 of 25

Important resources that have been provided throughout the module are summarized in this slide along with the module's objectives for your reference.

You may now proceed to the next module in the series, or click the exit button to return to the landing page.